

REMARKS

This application has been reviewed in light of the Office Action mailed on December 31, 2003. Claims 1-43, 50-56 and 59 are pending in the application with Claims 1, 50, 56 and 59 being in independent form. By the present amendment, Claim 50 has been amended. No new matter or issues are believed to be introduced by the amendments.

Before addressing the rejections under 35 U.S.C. §102(b) and §103(a) and the double patenting rejection, Applicant respectfully submits that independent Claims 1 and 50 are generic. Accordingly, Applicant respectfully requests reconsideration and reinstatement of previously withdrawn dependent Claims 2, 3, 5, 7-13, 15-24, 26-31, 33-39, 43 and 53-55 which depend from generic, independent Claims 1 and 50 in accordance with 37 C.F.R. §1.141.

In the Office Action, the Examiner correctly states that the listing of references in the specification is not a proper information disclosure statement. It is respectfully submitted that all of the references listed in the specification, except for two references, namely, U.S. Patent Nos. 3,765,606 and 4,294,407, have been cited in a properly filed information disclosure statement which the Examiner has acknowledged. A supplemental information disclosure statement is being filed concurrently with this amendment citing the two U.S. patents identified above which are listed in the specification and which have not been cited in an information disclosure statement. Applicant respectfully requests the Examiner to consider these two U.S. patents.

Claims 1, 4, 6, 14, 50-52 and 59 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,085,893 issued to Durley, III on April 25, 1978 ("Durley, III"). The rejection is respectfully traversed with respect to Claims 1 and 59. Applicant's have amended independent Claim 50 to better define Applicant's invention and to patentably

distinguish over the devices disclosed by Durley, III.

It is Applicant's belief that independent Claims 1, 50 and 59 patentably distinguish Applicant's invention over the devices disclosed by Durley, III. Applicants' Claims 1, 50 and 59 recite a structurally and functionally different apparatus than the devices disclosed by Durley, III as emphasized by the portions underlined below. Hence, Claims 1, 50 and 59 are not anticipated by the devices disclosed by Durley, III.

Applicant's Claim 1 recites:

A nozzle for ultrasound wound treatment, for producing a spray of liquid using an ultrasound transducer tip, directing and delivering said spray onto the wound surface, comprising: a main body having a proximal end that removably attaches to an ultrasound transducer, said main body also having a distal end which is marginally close to a distal end of the ultrasound transducer tip, said distal end of said main body having a gap with said distal end of said ultrasound transducer tip, said distal end of main body being coaxially placed about said ultrasound transducer tip, said main body being connected with at least one reservoir, for holding and delivering a wound treatment solution at a most distal end of said ultrasound transducer tip via an opening disposed about the most distal end of the ultrasound transducer tip for producing said spray. (Emphasis added)

Applicant's Claim 50 recites:

An apparatus for treating a wound comprising:
a transducer having a most distal end, said most distal end having a distal radiation surface configured for being arranged in proximity to the surface of the wound and for emitting ultrasonic energy; and
a fluid source for introducing a fluid to the distal radiation surface of the transducer via an opening disposed about the most distal end of the transducer to produce a spray, wherein the generated ultrasonic energy is delivered to the wound through the spray, and wherein the ultrasonic energy provides a bactericidal and a therapeutic effect for decreasing the healing time for the wound. (Emphasis added)

Applicant's Claim 59 recites:

A nozzle for ultrasound wound treatment comprising:
a holder configured and dimensioned for receiving and holding a liquid reservoir;
a liquid propagation path defining a dispensing orifice and in fluid communication

with the liquid reservoir for directing liquid from within the liquid reservoir to a most distal end of an ultrasound transducer via the dispensing orifice, wherein said ultrasound transducer is positioned within the nozzle for producing an ultrasonic spray and wherein said dispensing orifice is disposed about the most distal end of said ultrasound transducer; and

a housing dimensioned for housing at least a portion of the ultrasound transducer and for delivering the ultrasonic spray towards a wound surface. (Emphasis added)

Durley, III does not disclose or suggest at least the emphasized limitations of Claims 1, 50 and 59. Durley, III is directed to devices for atomizing a liquid using an ultrasonic transducer 12 and means for imparting ultrasonic vibrations to a vibratory member 14. The devices disclosed by Durley, III are not characterized as nozzles for removably attaching to the ultrasonic transducer 12, such as being coaxially placed about the ultrasonic transducer 12 or the vibratory member 14. The devices include a tube or pipe 16 for directing water or other liquid to the vibratory member 14. The water or other liquid is directed at a position proximal to the most distal end of the vibratory member 14 as shown by the enlarged side view of FIG. 10. Durley, III does not disclose the devices including, being connected to, or in fluid communication with a reservoir or holder for holding the water or other liquid. Durley, III teaches that the water or other liquid is delivered to the vibratory member 14 through tubes or pipes. There is no disclosure or suggestion that the tubes or pipes deliver the water from a reservoir connected to a main body of a nozzle, or a holder configured and dimensioned for receiving and holding a liquid reservoir and being part of the nozzle.

Accordingly, Durley, III does not disclose or suggest at least the limitations of Claims 1, 50 and 59 which are emphasized above. Specifically, Durley, III does not disclose or suggest a nozzle comprising a main body having a proximal end that removably attaches to an ultrasound transducer, as recited by Applicant's Claim 1. Further, Durley, III does not disclose or suggest a

distal end of the main body being coaxially placed about an ultrasound transducer tip, as recited by Applicant's Claim 1. Further still, Durley, III does not disclose or suggest the main body being connected with at least one reservoir, for holding and delivering liquid or a wound treatment solution at a most distal end of an ultrasound transducer tip via an opening disposed about the most distal end of the ultrasound transducer tip for producing a spray, as recited by Applicant's Claim 1.

Additionally, Durley, III does not disclose or suggest an apparatus comprising a transducer having a most distal end having a distal radiation surface, and a fluid source for introducing a fluid to the distal radiation surface of the transducer via an opening disposed about the most distal end of the transducer to produce a spray, as recited by Applicant's Claim 50. Also, Durley, III does not disclose or suggest a nozzle comprising a holder configured and dimensioned for receiving and holding a liquid reservoir, as recited by Applicant's Claim 59. Also, Durley, III does not disclose or suggest a nozzle comprising a liquid propagation path defining a dispensing orifice and in fluid communication with a liquid reservoir for directing liquid from within the liquid reservoir to a most distal end of an ultrasound transducer via the dispensing orifice, wherein the dispensing orifice is disposed about the most distal end of the ultrasound transducer, as recited by Applicant's Claim 59. Accordingly, withdrawal of the rejection under 35 U.S.C. §102(b) with respect to Claims 1, 50 and 59 and allowance of Claims 1, 50 and 59 are respectfully requested.

Claims 4, 6, 14, 51 and 52 depend from Claims 1 and 50, and therefore include the limitations of Claims 1 and 50. Accordingly, for at least the same reasons given for Claims 1 and 50, Claims 4, 6, 14, 51 and 52 are believed to contain patentable subject matter. Accordingly,

withdrawal of the rejection under 35 U.S.C. §102(b) with respect to Claims 4, 6, 14, 51 and 52 and allowance of Claims 4, 6, 14, 51 and 52 are respectfully requested.

Claims 21, 23, 25, 32 and 40-42 were rejected under 35 U.S.C. §103(a) as being unpatentable over Durley, III.

Claims 21, 23, 25, 32 and 40-42 depend from Claim 1, and therefore include the limitations of Claim 1. Accordingly, for at least the same reasons given for Claim 1, Claims 21, 23, 25, 32 and 40-42 are believed to contain patentable subject matter. Accordingly, withdrawal of the rejection under 35 U.S.C. §103(a) and allowance of Claims 21, 23, 25, 32 and 40-42 are respectfully requested.

The Examiner further rejected Claims 1, 4, 6, 14, 21, 23, 25, 32, 40-42, 50-52 and 59 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 9-15; 13-20; and 1-17, 19-22 of U.S. Patent Nos. 6,569,099; 6,663,554; and 6,601,581, respectively.

Applicant submits herewith three terminal disclaimers along with this amendment in compliance with 37 C.F.R. Sec. 1.321(c), since the present application and U.S. Patent Nos. 6,569,099; 6,663,554; and 6,601,581 are commonly owned. Each terminal disclaimer corresponds to one of the three patents commonly owned with the present application.

In view of the foregoing amendments and remarks, it is respectfully submitted that all claims presently pending in the application and not previously withdrawn, namely, Claims 1, 4, 6, 14, 21, 23, 25, 32, 40-42, 50-52 and 59, are believed to be in condition for allowance and patentably distinguishable over the art of record. Applicant also respectfully requests the reconsideration and reinstatement of previously withdrawn dependent Claims 2, 3, 5, 7-13, 15-

24, 26-31, 33-39, 43 and 53-55 which depend from generic, independent Claims 1 and 50 in accordance with 37 C.F.R. §1.141.

If the Examiner should have any questions concerning this communication or feels that an interview would be helpful, the Examiner is requested to call Applicant's undersigned attorney at (631) 501-5706.

Respectfully submitted,



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